

REMARKS

The present application was filed on October 30, 2003 with claims 1-22. In the outstanding Office Action dated April 14, 2005, the Examiner has: (I) withdrawn claims 18-22 from consideration; (ii) objected to the drawings; (iii) objected to claim 4 as lacking antecedent basis; (iv) rejected claims 1, 3 and 10-13 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,856,700 to Woodbury (hereinafter “Woodbury”); (v) rejected claims 14 and 15 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,828,628 to Hergenrother et al. (hereinafter “Hergenrother”);(vi) rejected claims 2, 4, 16 and 17 under 35 U.S.C. §103(a) as being unpatentable over Woodbury, in view of “common knowledge;” and (vii) indicated that claims 5-9 are allowable.

In this response, claims 18-22 have been canceled without prejudice as being drawn to a non-elected invention. Applicants retain the right to present these claims in a divisional application. Additionally, claim 1 has been canceled and claims 2-5, 10-13 and 15-17 have been amended. An acknowledgment of the receipt of formal drawings filed on December 9, 2003 is hereby requested. Applicants traverse the objections to the drawings and to claim 4 for at least the reasons set forth below. Applicants respectfully request reconsideration of the present application in view of the above amendments and the following remarks.

The Examiner has objected to the drawings for failing to show every feature of the invention specified in the claims. Specifically, the Examiner contends that the figures fail to show “the feature of a trench with a V-grove [sic] as claimed in claim 4” (Office Action; page 3, paragraph 4). Applicants respectfully disagree with this contention.

First, as set forth in 35 U.S.C. §113, a drawing need only be furnished “where necessary for the understanding of the subject matter sought to be patented.” Applicants submit that the v-groove feature recited in claim 4 is not essential for a proper understanding of the invention, but rather a v-groove is merely a specific type of trench “characterized by sidewalls that are v-shaped (e.g., sloped)” (specification; page 7, lines 15-17), as is generically set forth in claim 1 and illustrated, for example, in FIG. 3. The present specification makes it clear that such a v-groove is within the scope of the claimed invention (see, e.g., specification; page 7, lines 11-17). Consequently, Applicants do not believe that such additional limitations of claim 4 need to be depicted in the drawings.

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Nevertheless, Applicants submit that the additional v-groove feature recited in claim 4 is shown generally in FIG. 3 as trenches 112.

For at least the above reasons, Applicants assert that all elements recited in the claims that are necessary for a proper understanding of the invention are clearly depicted in the drawings. Accordingly, withdrawal of the objections to the drawings is respectfully solicited.

Claim 4 has been objected to as lacking antecedent basis. Specifically, the Examiner contends that there is no support in the drawings or specification for the V-groove feature recited in claim 4 (Office Action; page 4, last paragraph). Applicants respectfully disagree with this contention and assert that the specification clearly provides such support for the v-groove feature of claim 4. For example, the specification, at page 7, lines 11-17, states:

The present invention contemplates that the openings 110 through the epitaxial layer 104 may be formed using alternative methodologies, such as, for example, a conventional v-groove technique. As is known by those skilled in the art, a v-groove may be formed using a wet etching process (e.g., potassium hydroxide (KOH) based etch). A v-groove, as the name implies, is typically characterized by sidewalls that are v-shaped (e.g., sloped), and thus significantly less steep compared to the sidewalls of trenches 112.

Furthermore, the v-groove trench is depicted generically in the drawings, for example, as trench 112 in FIG. 3. Accordingly, since the specification and drawings clearly provide antecedent support for the v-groove feature set forth in claim 4, withdrawal of the objection to claim 4 is respectfully requested.

Claim 5, which the Examiner has indicated as being allowable, has been rewritten into independent form including all of the limitations of the base claim and any intervening claims. Accordingly, favorable allowance of claim 5, and the claims depending therefrom, is respectfully requested.

Claims 1, 3 and 10-13 stand rejected under §102(b) as being anticipated by Woodbury. The Examiner contends that Woodbury discloses all of the elements set forth in the subject claims. Claim 1 has been canceled, thus rendering the rejection of claim 1 moot. Additionally, claims 3 and 10-13 have been amended to depend from claim 5. Applicants assert that claims 3 and 10-13 are patentable over the prior art of record at least by virtue of their dependency from claim 5, which the

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Examiner has indicated as being allowable. Moreover, one or more of these claims define additional patentable subject matter in their own right. Accordingly, favorable reconsideration and allowance of claims 3 and 10-13 are respectfully solicited.

Claims 14 and 15 stand rejected under §102(e) as being anticipated by Hergenrother. The Examiner contends that Hergenrother discloses all of the elements set forth in claims 14 and 15. Applicants respectfully disagree with this contention. Since the Examiner has not rejected claim 1 as being anticipated by Hergenrother, and since claims 14 and 15 depend from claim 1, the rejection of claims 14 and 15 under §102(e) as being anticipated by Hergenrother is believed to be improper. Furthermore, Applicants submit that Hergenrother is not believed to be available as prior art for the purpose of sustaining an obviousness rejection against the claimed invention. Specifically, Hergenrother, which was filed prior to but issued after the filing date of the present application, and the claimed invention were, at the time the invention was made, owned by the same entity or subject to an obligation of assignment to the same entity, namely, Agere Systems Inc. In the present application, this assignment was recorded on September 26, 2000, at reel 014678, frame 0941.

As set forth in 35 U.S.C. §103(c), “[s]ubject matter developed by another person, which qualifies as prior art only under one or more of subsections (e), (f), and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.”

Notwithstanding the above traversal, however, claims 14 and 15 have been amended to depend from claim 5, which the Examiner has indicated as being allowable. Claims 14 and 15 are therefore believed to be allowable by virtue of their dependency from claim 5. Accordingly, favorable reconsideration and allowance of claims 14 and 15 are respectfully requested.

Claims 2, 4, 16 and 17 stand rejected under §103(a) as being unpatentable over Woodbury, in view of common knowledge. The Examiner contends that the features set forth in claims 2 and 4 have “become old and well known in the art” (Office Action; page 11, paragraph 10). Additionally, the Examiner contends that, with regard to claims 16 and 17, “where the general condition was disclosed in the prior art discovering the optimum or workable range involves only routine skill in the art” (Office Action; page 12, first paragraph). Applicants respectfully disagree

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with these contentions and assert that, where “common knowledge” is used in the rejection of a claim, it is well-established law that evidence of what is presumed to be “common knowledge” must be documented on the record. The Federal Circuit has held that:

Common knowledge and common sense, even if assumed to derive from the agency’s expertise, do not substitute for authority when the law requires authority . . . Thus when they rely on what they assert to be general knowledge to negate patentability, that knowledge must be articulated and placed on the record. *In Re Sang-Su Lee*, 277 F.3d 1338, 1345 (Fed. Cir. 2002).

Notwithstanding the above traversal, however, claims 2, 4, 16 and 17 have been amended to depend from claim 5. These claims are believed to be patentable over the prior art of record at least by virtue of their dependency from claim 5, which the Examiner has indicated as being allowable. Accordingly, favorable reconsideration and allowance of claims 2, 4, 16 and 17 are respectfully solicited.

In view of the foregoing, Applicants believe that pending claims 2-17 are in condition for allowance, and respectfully request withdrawal of the §102 and §103 rejections.

Respectfully submitted,



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